New Look at River Basins

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FISCAL NOTES

A Monthly Review of the Texas Economy from the Office of Susan Combs, Texas Comptroller of Public Accounts, December 2007

OCTOBER REVENUE (IN MILLIONS): SALES TAX: $1,660.9 OIL PRODUCTION: $89.6 NATURAL GAS: $161.1 MOTOR FUELS: $251.2 MOTOR VEHICLE SALES: $311.9 TOBACCO: $141.5

Around Texas

■ **Rice** A recent study finds Rice University Texas' most productive research university. The report by Chester, Pa.-based Academic Analytics ranked the Top 10 largest research universities in Texas measured by faculty scholarly productivity.
The University of Texas at Austin took second place; Texas A&M University took third.

■ **High-tech destination** Twenty-two of the 50 fastest-growing technology companies in Texas are based in the Dallas area, according to Deloitte & Touche USA LLP's annual ranking.

■ **Southwest Airlines** The Dallas-based airline earned $162 million in the third quarter and $533 million for the first nine months of 2007, the best opening three quarters in the airline's history.

INSIDE

Keeping Texas Liquid

Officials attempt to boost the state's water supply in the face of population growth

"We never know the worth of water 'til the well is dry."
— Thomas Fuller, physician and author, 1732.

If Fuller was right, Texans may truly know water's worth by mid-century.

Water could become scarcer in the next six decades if conservation is sidestepped and new sources aren't found. One of the weightier forces at play is the projected near-doubling of the state's population by 2060.

Texans could consume 21.6 million acre-feet of water annually by then, according to the State Water Plan, yet the Texas Water Development Board (TWDB) projects that the state's supply could only be 14.6 million acre-feet without serious improvements.

CONTINUED PAGE 10

by **Clint Shields**

Going With the Flow

SB 3 takes steps to keep water moving across Texas

The 80th Texas Legislature has taken steps to keep Texas waters flowing to the Gulf of Mexico. Several state agencies, associations and environmental groups served as advisors.

Senate Bill 3, authored by Sen. Kip Averitt and sponsored by House Rep. Robert Puente, calls for a statewide look at Texas river basins — surface water — and the bays and estuaries that eventually receive their waters. The legislation is the next step for Texas, and backers hope it will help find a balance between human usage and the environment.

"This will help determine how much water there should be up and down a river all the way down to the coast," Puente says. "Water is our most precious resource and we must protect it for future generations."

Basin-by-Basin Look

Surface water belongs to the state, and aside from most livestock and domestic needs, permits are needed in order to draw it. The subject addressed by this legislation is unappropriated freshwater — water not already destined for use by a municipality or some other permitted entity — and keeping it in Texas' rivers and streams.

One of SB 3's major changes is in how the Texas Commission on Environmental Quality (TCEQ) handles permit applications for surface water use.

Texas' river and stream flows will now be considered basin by basin down to their bay and estuary systems, with recommendations to follow on their protection. This new approach makes sense for the state, says Dean Robbins, assistant general manager of the Texas Water Conservation Association (TWCA).

"It's a much more comprehensive approach," says Robbins. "Recommendations will now come ecosystem by ecosystem."

The plan is not only a good one, Robbins says, but a unique one he does not believe is modeled after similar studies.

Todd Chenoweth, director of TCEQ's water supply division agrees, adding that the basin-by-basin approach will help determine current flows as well as future flows.

"SB 3 requires the state to look comprehensively at environmental flow needs for all of the river basins," says Chenoweth. "We're looking to leave flow in the streams to protect species in the habitats and

Divide and Study

Texas river basins will be divided into three groups of study (below) to ensure enough water is not only in Texas rivers, but also flowing into bays and estuaries.

- The Trinity and San Jacinto rivers and Galveston Bay, and the Sabine and Neches rivers and Sabine Lake Bay.
- The Colorado and Lavaca rivers and Matagorda and Lavaca bays and the Guadalupe, San Antonio, Mission and Aransas rivers and Mission, Copano, Aransas and San Antonio bays.
- The Nueces River and Corpus Christi and Baffin bays, the Rio Grande, the Rio Grande estuary and the Lower Laguna Madre, and the Brazos River and its associated bay and estuary system.

provide freshwater flows to the bays and estuaries. But slowly, and one basin at a time. We're not trying to do it all at once, but we are trying to do it all."

Local Flavor

SB 3 requires local participation in determining the statewide assessment. The bill creates a nine-person Environmental Flows Advisory Group, with three members each appointed by the governor, the lieutenant governor and the speaker of the Texas House of Representatives.

The advisory group then must appoint local stakeholder groups within each river basin, as well as a statewide science advisory committee. The local stakeholder groups may establish local scientific teams to assist with their basins' freshwater in-stream flow — the water in a river or stream — and inflow — the water flowing into a bay — studies. Scientists will help make recommendations to TCEQ on how to best protect Texas' fish, oysters, shrimp and other bay and estuary species. Shrimping alone is a $225 million industry in Texas.

Each basin's local stakeholder group will recommend environmental water needs to TCEQ, which will take these into account when considering future water-use permits.

> "The cheapest way to make water is to hang on to what you already have." — Bill McCann, Lower Colorado River Authority

Getting Started

The first local stakeholders group will appoint its local science team by March 1, 2008. Texas' river basins are divided into three groups for study. The first will be the river basin and bay system consisting of the Trinity and San Jacinto rivers and Galveston Bay, and the river basin and bay system consisting of the Sabine and Neches rivers and Sabine Lake Bay.

That first group is scheduled to report to TCEQ by Sept. 1, 2009, with the remaining groups expected to report in 2010 and 2011.

In the end, the environmental study work of the stakeholder groups will help TCEQ establish future permitting guidelines. That kind of attention will be invaluable to Texans as the state's population increases and the number of rivers and streams stays the same.

"Economically, the cheapest way to make water is to hang on to what you already have," says Bill McCann, spokesman for the Lower Colorado River Authority (LCRA). LCRA manages the lower basin of Texas' Colorado River, which itself drains more than 42,000 square miles before emptying into Matagorda Bay. Matagorda Bay is in the second group slated for study.

In the end, the basin studies and their local involvement will have positive impacts across the state, Robbins says.

"The truth is, this isn't just about the bays, it's about the streams and the rivers, too," he says. FN

by **Bruce Wright**

The Rains Came…and Stayed

A wet year sparks farm and ranch turnaround

"If you don't like the weather in Texas… just wait."

Texas has always been prone to weather extremes, but the old adage never seemed truer than in 2007, when widespread, heavy rains snapped a two-year drought that had cost the state billions.

The cure was worse than the disease for some. Flooding in June prompted Texas Gov. Rick Perry to issue state disaster declarations for 44 Texas counties. Floods were blamed for at least 13 deaths and damage and destruction of at least a thousand Texas homes.

But for most Texas farmers and ranchers, the return of wet weather was nothing short of a blessing, and rebounding harvests will go a long way toward easing the economic strains caused by flooding.

It's Over!

The drought of 2005 and 2006 was one of the worst of the past century. In August 2006, Texas Cooperative Extension estimated that the drought had cost Texans about $4.1 billion in losses of crops and livestock.

"There were some parts of the state, mainly north central and south central Texas, where for one-and-a-half to two years it was the driest period on record," says John W. Nielsen-Gammon, professor of meteorology at Texas A&M University and the Texas state climatologist.

But are we really out of the drought now?

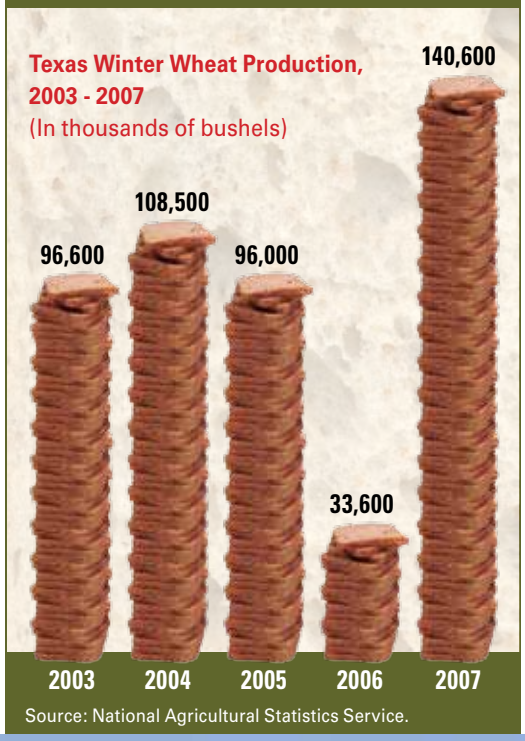
"That's usually a difficult question, but at this point the answer is yes," says Nielsen-Gammon. "Even the long-term [rain] deficits are mostly gone at this point."

Best of all, the rain was distributed fairly evenly across the state, and for a while, at least, the rains perpetuated themselves.

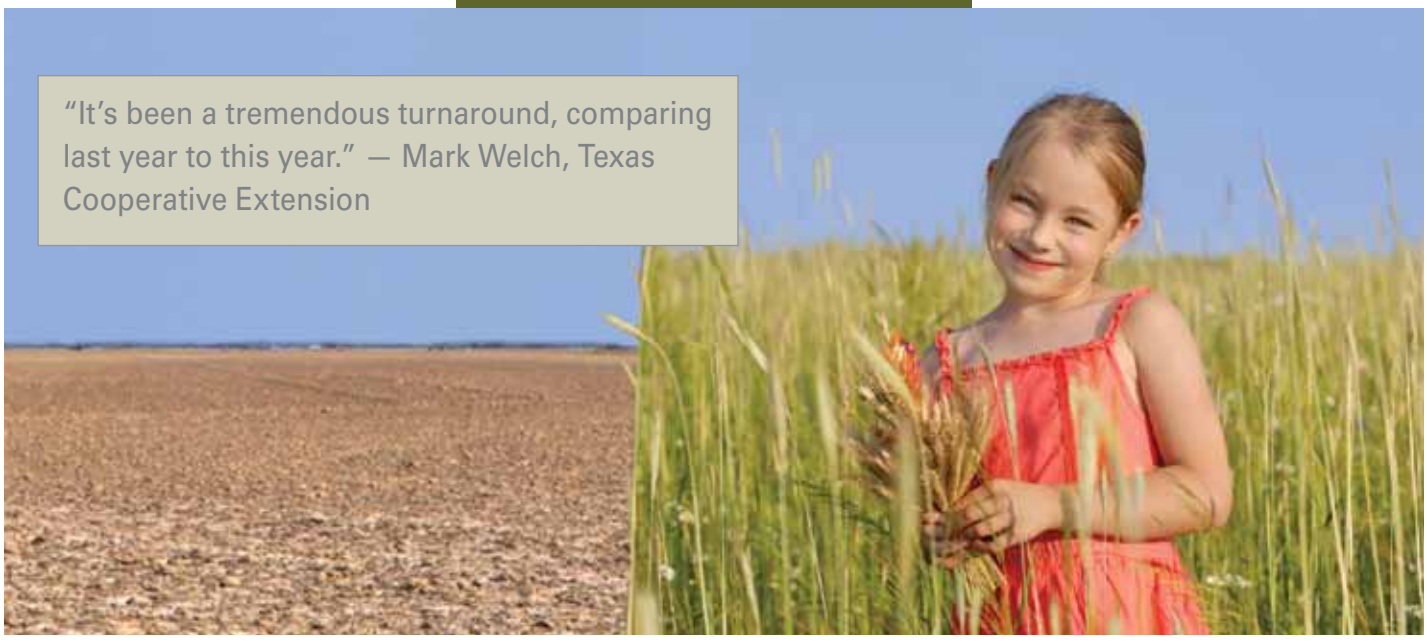
"When we receive rain in the summertime, it makes the soil wet and we get more evaporation, and that leads to more thunderstorms and more rainfall," the climatologist says. "So the climate system has a memory built into it."

What a Difference a Year Makes

The end of the drought brought a sharp upswing in Texas wheat production. The 2007 harvest of winter wheat — one of the state's most important crops — was four times larger than that of 2006.



Source: National Agricultural Statistics Service.



High Tides and Green Grass

The rains made all the difference for Texas farmers and ranchers. Last year, many farmers saw their crops "zeroed out," or considered a total loss for insurance purposes. The 2006 harvest of winter wheat — one of Texas' biggest crops — was the state's lowest since 1971. Ranchers felt the pinch, too, as pastures turned to cracked earth and the price of hay doubled — when you could find it.

"It's been a tremendous turnaround, comparing this year to last year," says Mark Welch, a marketing and policy economist for Texas Cooperative Extension. "And it's statewide. With the wet weather that moved in over the winter and continued through the spring, it was a very good year for wheat yields, even though they were hampered by wet conditions right at harvest."

Texas produced about four times as much wheat this year as in 2006. Texas' production of sorghum for grain nearly tripled in 2007.

Going to Extremes

Texas has always been prone to extreme weather events, from floods and drought to hail and tornadoes. The *Texas Almanac* lists some of the state's rain-related records:

Year	Record	Location	Rain (Inches)
1941	Wettest Year	Statewide Avg.	42.6
1917	Driest Year	Statewide Avg.	14.3
1873	Greatest Annual Rain	Clarksville	109.4
1956	Least Annual Rain	Wink	1.8
July 25-26, 1979	Greatest Rain in 24 Hours	Alvin	43.0*

*** Unofficial estimate of rainfall during Tropical Storm Claudette.**

Source: The *Texas Almanac*, www.texasalmanac.com/environment/extreme/index.html.

"We've gone from virtually no crop last year to record crops this year," Welch says. "It's just amazing."

Of course, rainfall measured in feet rather than inches hurt some farmers as well. In some areas, the losses at harvest time were devastating due to flooded conditions, Welch says. "The broad picture, however, is very positive — high prices, high yields. It's a very good grain year," says Welch.

"Every Available Acre"

The benefits of this year's rain will continue.

"Next year, we're going to have great subsoil moisture conditions," says Welch. "It looks like things will be very favorable. With prices like they are, and the moisture conditions we have, it appears that every available acre that can be planted to wheat will be done so this fall." FN

Working the Land

While Texas has become a highly urbanized state, most of its land area still is devoted to agriculture. According to the 2002 Census of Agriculture, more than three-quarters (77.5 percent) of Texas' total acreage is farm or ranch land.

Texas Land Area	Acreage (in millions)
Total area, state of Texas	167.6
Total land in farms and ranches	129.9
Cropland	38.7
Pastureland	83.4
Percent irrigated	11.8%

Source: Texas Cooperative Extension and U.S. Bureau of the Census.

by **Editorial Team**

Droplets *Small items of big interest to water users*

Salt-free in El Paso

El Paso has taken a big step toward guaranteeing its water supply by building the world's largest inland desalination plant. The plant, which opened this past August, will supply up to 27.5 million gallons of fresh water each day to El Paso and the nearby army installation at Fort Bliss.

El Paso gets its water from the Rio Grande River and the Hueco Bolson, a large underground aquifer. But the Rio Grande's waters depend upon snowfall upstream, and in drought years the aquifer becomes all-important for the city. The Hueco Bolson contains large pockets of fresh water, but the majority of its water is brackish — not as salty as seawater, but far too salty for most human purposes.

El Paso's $87 million desalination plant forces brackish groundwater through a series of reverse-osmosis membranes, removing salt and other contaminants and recovering about 83 percent of the original groundwater as fresh water. The salty solution that remains will be stored in deep injection wells 22 miles from the city, according to Karol Parker, public affairs officer for El Paso Water Utilities.

"This plant will help us ensure that we have sufficient water for the next 50 years of growth and development," Parker says.

For more information, go to www.epwu.org/water/desal-info.html.
(Bruce Wright)

U.S. Water Use

Each day the U.S. uses about 346 billion gallons of fresh water, and nearly 80 percent of it is used for irrigation and thermoelectric power. Water for thermoelectric power is used to generate electricity with steam-driven turbine generators. The average U.S. citizen uses 80 to 100 gallons of water daily, most of which is flushed down the toilet. Flushing the toilet accounts for the largest amount of residential water use.

Approximately 85 percent of U.S. residents receive their water from public water facilities, while the remaining 15 percent get their water from private wells or other sources.

Source: www.allaboutwater.org.
(Karen Hudgins)

Water Water Everywhere

Water covers 70 to 75 percent of the earth's surface, and the earth contains a total of about 326 million cubic miles of water. Humans can use only about three-tenths of a percent of this water.

Aquifers store more water than is found on the earth's surface. The earth is a closed system, meaning that it rarely loses or gains extra matter. The water on the earth today is the same water that existed on the earth millions of years ago.

Source: www.allaboutwater.org.
(Karen Hudgins)

All Bottled Up

Gallons of bottled water on the market more than doubled from 1990 to 2000. In 1990, about 2.2 billion gallons made up the U.S. bottled water market, while in 2000, sales topped 5 billion gallons,

according to the International Bottled Water Association (IBWA).

Non-sparkling water nearly tripled its market share, while sparkling water lost about 2 percent of the market during that period.

The industry's growth has continued. In 2006, total bottled water volume sold exceeded 8.25 billion gallons, a 9.5 percent increase over 2005, the IBWA reports. The wholesale dollar sales for bottled water exceeded $10.8 billion.

For more information, go to www.bottledwater.org/.
(Tracey Lamphere)

But Is It Safe To Drink?

The United Nations has developed an ambitious program of goals it hopes will ease the world's clean-water crisis by the year 2015. Goals include making clean water and sanitation priorities, requiring that every individual have access to 20 liters of clean, fresh water daily, and mandating that economically disadvantaged people get water for free.

The UN's *Human Development Report 2006* cites the lack of safe, sanitary water as one of the most urgent humanitarian crises facing our planet.

Nearly 2.6 billion people in poor and developing countries lack access to even the most rudimentary sanitation. As a result, thousands become too ill to go to work, attend school or maintain normal functioning family life. An estimated 1.1 billion have no reliable access to clean, safe drinking water. As a consequence, 1.8 million children in the world's poorest countries die annually from diarrhea and other water-borne diseases.

For more information, go to http://hdr.undp.org/.

(David Rivers)

Fill Up the Tub

The Edwards Aquifer provides drinking water for more than 1.5 million Texans. Like a bathtub's overflow drain, the Comal and San Marcos rivers flow from the aquifer when it is 95 percent full.

"There's a lot of water, but when it drops below that level, those springs stop flowing," says Mary Ambrose, a TCEQ policy specialist.

SB 3 lifted groundwater withdrawal caps from the aquifer to 572,000 acre-feet from its previous mark of 450,000 acre-feet. If all issued withdrawal permits were pumping, the total would have topped the previous cap, Ambrose says. The Edwards Aquifer Authority, which regulates use of the aquifer's water, will also assist in studying threatened and endangered species that rely on the aquifer for habitat.

(Clint Shields)

Water Funds for Communities

The Texas Water Development Board (TWDB) approved financial assistance in August for $12.5 million in water-related projects in Texas communities. The funding comes from the Clean Water State Revolving Fund and will pay for wastewater system improvements for the Harris County Water Control and Improvement District and the city of Los Fresnos in Cameron County. The TWDB is charged with collecting and disseminating water-related data, assisting with regional planning and preparing the State Water Plan for developing the state's water resources.

For more information, visit www.twdb.state.tx.us.

Source: Texas Water Development Board.

(Karen Hudgins)

Drops Add Up

Follow these tips to conserve water at home:

- Don't water your lawn too often and avoid watering during the hottest part of the day or when it is windy.

- Run the dishwasher and washing machine when they are fully loaded.

- Thaw frozen food in the refrigerator or microwave instead of running water over it.
- When hand-washing dishes, use two basins — one for washing and one for rinsing-rather than letting the water run.
- Clean sidewalks and driveways with a broom, not a hose.
- If you have a swimming pool, get a cover. You'll cut evaporation loss by 90 percent.
- Repair dripping faucets and leaky toilets. Dripping faucets can waste about 2,000 gallons of water each year. Leaky toilets can waste as much as 200 gallons in a day.

Source: American Water Works Association.

(Tracey Lamphere)

by **Karen Hudgins**

High Tides on Texas Coast

New funding will shore up fading coastline

After facing several years of evaporating funding, Texas beaches are getting a welcome wave of cash to fight erosion.

The 367-mile-long Texas gulf coastline loses around 235 acres of lands to erosion each year, equivalent to more than 181 football fields of beach, according to the Texas General Land Office (GLO). Funding to save and restore the state's beaches was cut in half in recent years. The Texas Legislature reduced funding for beach repair and protection from $15 million in 2002-03 to $7.3 million in both 2004-05 and 2006-07.

But in 2007, the 80th Legislature approved a record level of funding for coastal management — $25 million for 2008-09. The funds will come from the state's sporting goods sales tax.

Of the $25 million, $17.5 million will go to the Texas Coastal Erosion Planning and Response Program (CEPRA). The legislature formed this program in 1999. It is an alliance of the GLO, federal and local governments and citizens of coastal communities. CEPRA dollars pay for estuary programs, habitat restoration and protection, coastal research and studies and for beach nourishment, dune restoration and shoreline protection projects. The remaining $7.5 million will fund the GLO's Coastal Stewardship Division.

In October the GLO announced a $13.5 million project — the largest beach project in Texas history — to restore at least three miles of eroded Galveston beaches. Funding for the project will include $5 million in state CEPRA funding, $6 million in proposed state Coastal Impact Assistance Program funding (CIAP), $1.25 million in county CIAP funding and $1.25 million in local funds.

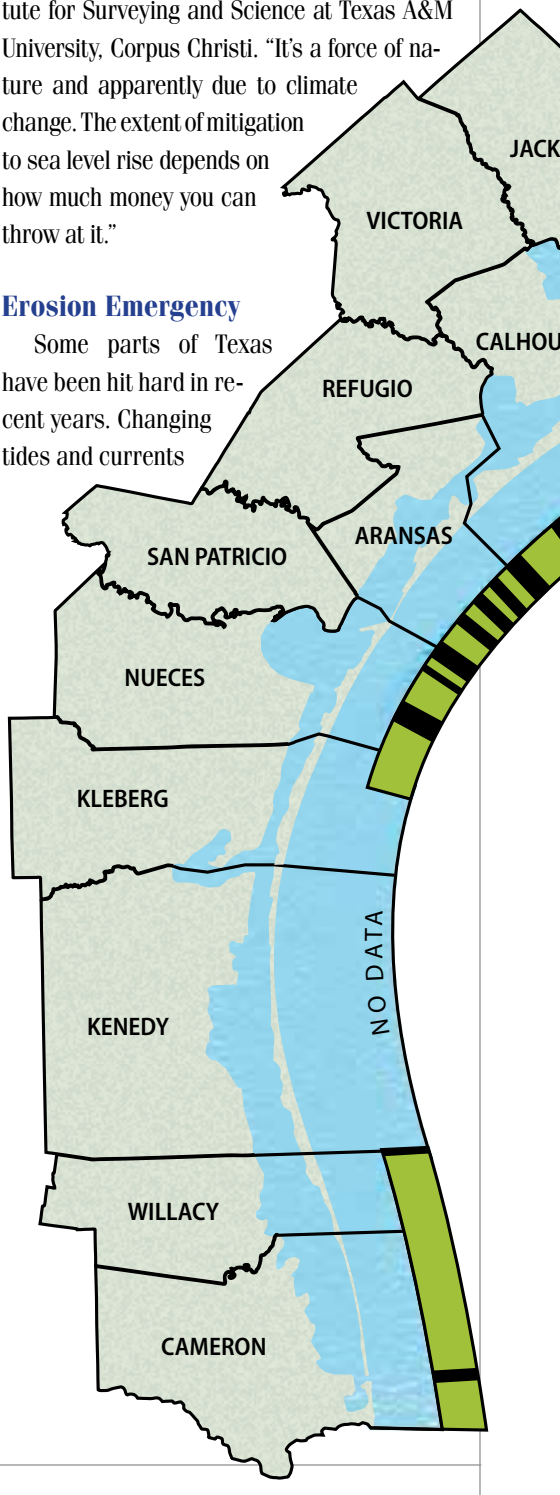
Federal Funding

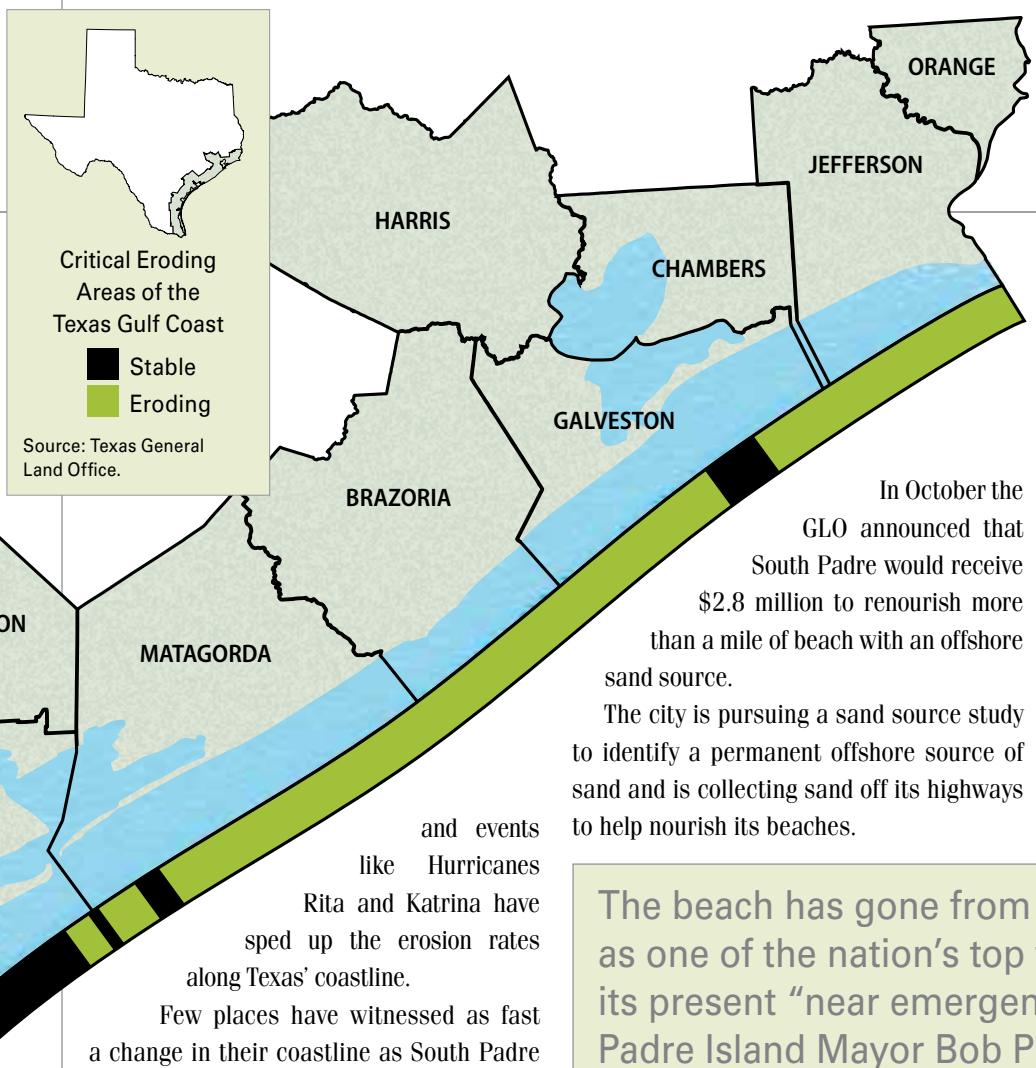
Federal funds will also help. In 2007, the U.S. Department of the Interior allocated $48.6 million to Texas for CIAP. This program helps coastal states and coastal political subdivisions within states that have either supported or been affected in some measure by outer continental shelf oil and gas exploration and development. Of the $48.6 million, $31.6 million is available for the state, and $17 million is earmarked for specific counties. The funding will pay for coastal protection and restoration — including conservation, planning assistance and infrastructure projects — related to offshore energy exploration.

"On a global scale, the sea level is rising, and that affects coastal erosion," says Dr. Gary Jeffress, director of the Conrad Blucher Institute for Surveying and Science at Texas A&M University, Corpus Christi. "It's a force of nature and apparently due to climate change. The extent of mitigation to sea level rise depends on how much money you can throw at it."

Erosion Emergency

Some parts of Texas have been hit hard in recent years. Changing tides and currents

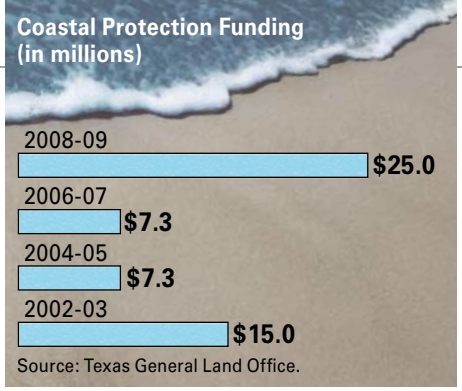




Funding Wave

In 2007, the 80th Legislature appropriated a record level of funding for repairing and protecting Texas beaches.

Coastal Protection Funding (in millions)



Source: Texas General Land Office.

and events like Hurricanes Rita and Katrina have sped up the erosion rates along Texas' coastline.

Few places have witnessed as fast a change in their coastline as South Padre Island. The beach has gone from being recognized in 2005 as one of the nation's top five restored beaches to its present "near emergency situation," says South Padre Island Mayor Bob Pinkerton.

"The Katrina high tides hit us sufficiently to cause major erosion on portions of our beach," says Pinkerton.

South Padre also missed a dredging cycle with the Port of Brownsville. Usually, when the port dredges its channel, South Padre takes the dredged sand and shores up its beaches. But in 2006, the port needed its dredged sand due to high tides. South Padre also faced high-energy waves during cold fronts in the winter of 2006-07, further eroding the beach.

"We have a serious problem at this time on the north end of our beaches," Pinkerton says. "Out of five miles, about a half or three-fourths of a mile of beach is in serious condition."

In October the GLO announced that South Padre would receive $2.8 million to renourish more than a mile of beach with an offshore sand source.

The city is pursuing a sand source study to identify a permanent offshore source of sand and is collecting sand off its highways to help nourish its beaches.

> The beach has gone from being recognized in 2005 as one of the nation's top five restored beaches to its present "near emergency situation." — South Padre Island Mayor Bob Pinkerton

Beach nourishment involves pumping sand from one location onto an eroding beach. It can be costly, and often the beaches with the most erosion have the fewest sources of sand available.

Rising Seas

Surfside Beach, Galveston Island and Jefferson County around U.S. Highway 287 also are critical areas for beach repair.

Erosion has hit Surfside Beach, near Freeport, so hard that high tides roll in on some private homes. In March, the GLO announced that 14 Surfside homes on the public beach would be moved with the state's help.

Sea levels are slowly rising around Texas, contributing to erosion. National Ocean Service data observes the sea level is rising at a rate of about 2.13 feet per century near Galveston. This is the highest measurement of rising sea level along the Texas coast, Jeffress says. Rockport, near Corpus Christi, is rising about 1.5 feet per century.

"It's not just a sea level rise," Jeffress says. "It's also land subsidence. This occurs when the land is compacting and compressing due to water, oil, and gas extraction."

Tourism Dollars

Texas beaches and the tourists they draw are a huge economic driver for the state — generating an estimated $7 billion annually.

"The beach is the number one reason people travel here," says Keith Arnold, CEO of the Corpus Christi Convention and Visitors Bureau. "We're always concerned about erosion, but fortunately to date we haven't been impacted by it in a significant fashion."

South Padre is looking at a one- to two-year project to address its emergency erosion situation and identify permanent sources of sand.

"The Legislature is allowing us to use beach maintenance funds for beach re-nourishment," Pinkerton says.

For more information on Texas coastal issues, erosion rates and beach restoration projects, visit www.glo.state.tx.us/coastal/erosion.html. FN

by **Tracey Lamphere**

CONTINUED FROM PAGE 1

Keeping Texas Liquid

(An acre-foot is the amount of water needed to fill an acre to the depth of a foot.)

The board's 2007 State Water Plan estimates it will cost more than $30 billion from now until 2060 to fund recommended water management strategies. It will take more than $173 billion — including the $30 billion — to distribute and clean water and control floods by then.

Gauging the Need

Texas has about 191,000 miles of streams and rivers, 15 major river basins and eight coastal basins. Of nearly 200 major reservoirs, 175 provide more than half of the state's water supply. Even with this past summer's record-setting rainfall, we are never far from our next drought.

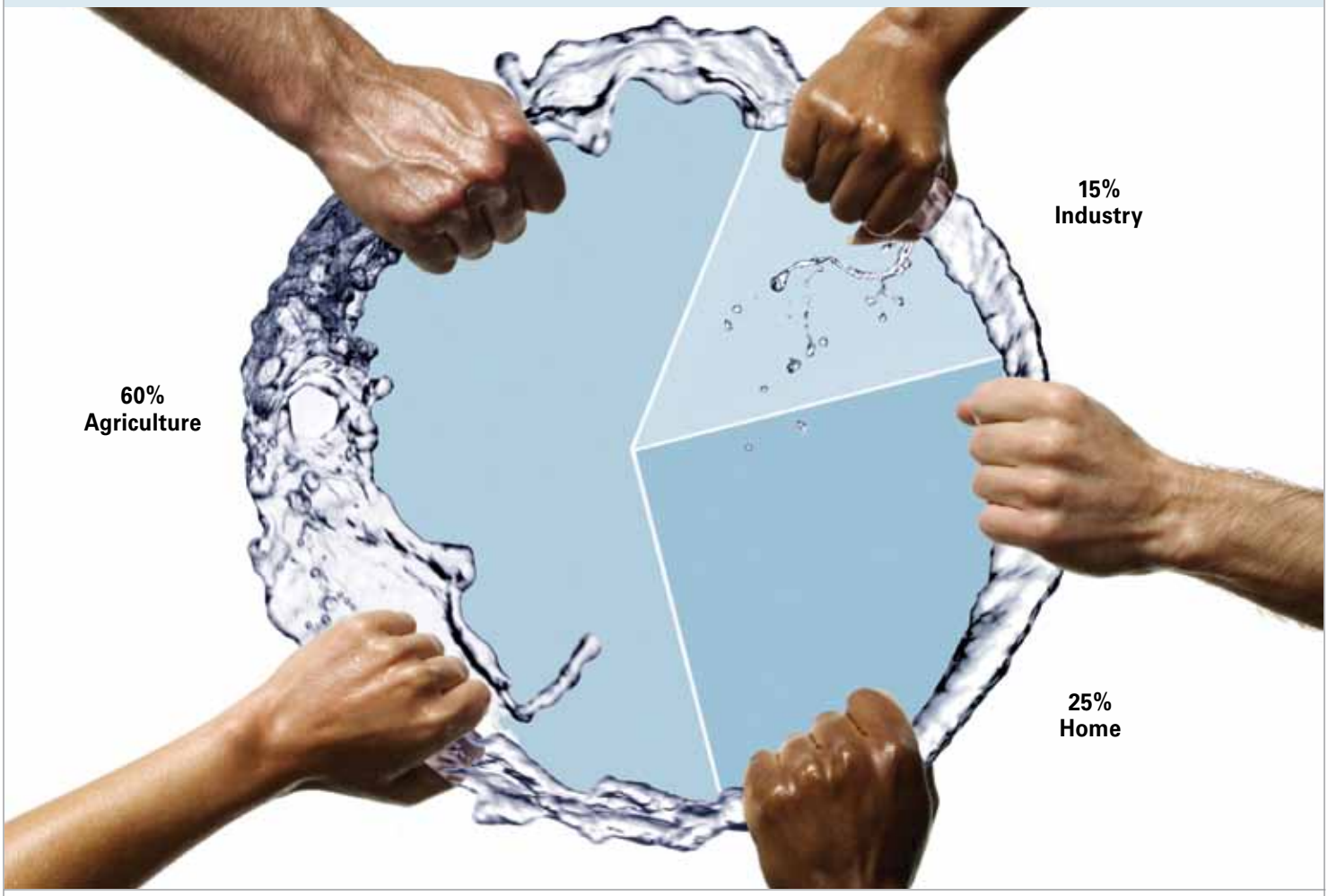
Texas uses about 711 million gallons each day, with 60 percent going to agriculture, 15 percent to industry and 25 percent directly to the state's 23.5 million citizens, according to the TWDB.

Texas' major reservoirs lose about 90,000 acre-feet of storage capacity per year from sedimentation, or about 4.5 million acre-feet of water by 2060. New major reservoirs, though helpful, aren't expected to supply as much water as what is lost through sedimentation.

The '07 water plan identified 14 new major reservoir sites and two minor ones, which were designated as such by the 2007 Legislature during its 80th session. The plan, a five-year culmination of work by regional water planning groups, estimates that water demands will increase 27 percent, from about 17 million acre-feet in 2000 to 21.6 million acre-feet in 2060. Yet supply will begin dropping off, with 17.9 million-acre feet in 2010 dwindling to 14.6 million acre-feet by 2060. If current conditions continue, the

The Tug on Texas Water

Texans use about 711 million gallons each day, with 60 percent going to agriculture, 15 percent to industry and 25 percent directly to the state's 23.5 million citizens. — TWDB



state is looking at an 8.8 million acre-feet gap in supply versus demand, according to the State Water Plan.

TWDB says that not implementing the plan would leave about 85 percent of the state's projected population without enough water in drought conditions by 2060.

Although a strong statement, it's one to be mindful of, says Ken Rainwater, director for the Water Resources Center at Texas Tech University. He says the definition of drought is very personal. It revolves around the question: Is the water where people want it, when they want it, and is there enough to fill the need? This brings up another crucial question – how much water do we really need?

People in the major metro areas of the state each used an average of 140 to 240 gallons a day in 2004, depending on the cities where they lived. If driven only by our desire for perpetually green lawns, clean cars and sparkling swimming pools, the gallons per capita consumed daily might be considerably higher, but some cities have made significant headway in conservation.

The Best Bargain

San Antonio, one of the most water-conserving cities in the country, enacted a 2006 ordinance that seeks a per capita usage of 132 gallons per day. Last year its residents averaged using 136 gallons, and officials hope to see that number fall to 116 by 2016. Regulations on sprinkler systems, landscaping, restaurants and carwashes have helped the city approach its goal.

San Antonio Water System (SAWS) officials say the city's draw from the Edwards Aquifer is still at 1988 levels, despite more than 300,000 additional residents today. By not having to supply an additional 175 billion gallons of water, the system has saved $549 million, says Karen Guz, SAWS director for conservation.

"Conservation is always the best bargain," Guz says.

SAWS figures that every $1 invested in conservation efforts saves $7. SAWS invests $5 million a year into direct conservation efforts and has a yearly water savings goal of 500 million gallons, or about one less gallon per person per day.

SAWS has even given away dual-flush toilets to people whose homes were built before 1992. Twice as many as expected have been given out after a water department official demonstrated the toilet's power on a local TV show. He flushed an Idaho potato, the footage of which later landed on YouTube.

"The toilets are walking themselves out the door," Guz says. "Who knew toilets could be so popular?"

The easiest way to conserve water is to replace old fixtures and appliances. Two major hotels recently switched to low-flow (not low-pressure) showerheads and dual-flush toilets, saving 40 to 47 percent in average water usage. Customers have enjoyed the change too. The Omni

CONTINUED PAGE 12

Time Will Tell

Forty-five million thirsty Texans will challenge the state's ability to supply water in 2060.
— State Water Plan

CONTINUED FROM PAGE 11

Hotel ascended several rankings in customer satisfaction among its peers after the new showerheads were installed.

The overall message isn't about deprivation, but efficiency. That includes lawn maintenance.

"We find here in San Antonio that it is not necessary to irrigate home landscapes more than one time per week in order to have them look attractive," Guz says. "Every three to five days would be too often. And in the winter, one irrigation per month is all that is called for if there is not a soaking rain that month. Often no irrigation is needed at all between mid-November and March."

Irrigation needs are tracked with weather data, and consumers can get watering advice from SAWS' free Seasonal Irrigation Program, a partnership with Texas Cooperative Extension.

"People have wonderful conservation ethics that are part of their daily lives," Guz says.

El Paso Water Utilities (EPWU) began installing leak detection loggers three years ago. About 10,000 have been used throughout the system. If a leak is detected, the units transmit a signal, and information is sent to officials who then dispatch a crew to fix the leak. EPWU claims leak detection saves the system about 700 million gallons of water per year.

Savings By Agriculture

Overall water consumption in agriculture is expected to decline from 60 to 40 percent of all water usage statewide by 2060. The State Water Plan recommends irrigation scheduling, on-farm irrigation audits, low-pressure pivot sprinkler heads and drip irrigation systems for conservation.

Drip irrigation systems deliver water directly to the plants' roots, and their water usage — just a trickle compared with traditional methods — is measured in gallons per hour, not per minute. According to the plan, conservation efforts would save 1.4 million acre-feet of water in 2060, which is about 17 percent of agricultural water consumption.

Cost is a major hurdle. Jeff Johnson, director of farm operations for the College of Agricultural Sciences and Natural Resources at Texas Tech University, says drip irrigation systems can cost $700 to $800 an acre and LEPA (low energy, precision application) center pivot systems can cost $300 to $400 per acre to install.

Making the best of Mother Nature, many farmers use furrow dikes to maximize rainwater. Mounds of dirt in furrows keep rainwater from running off the land. These are used in irrigated and non-irrigated lands.

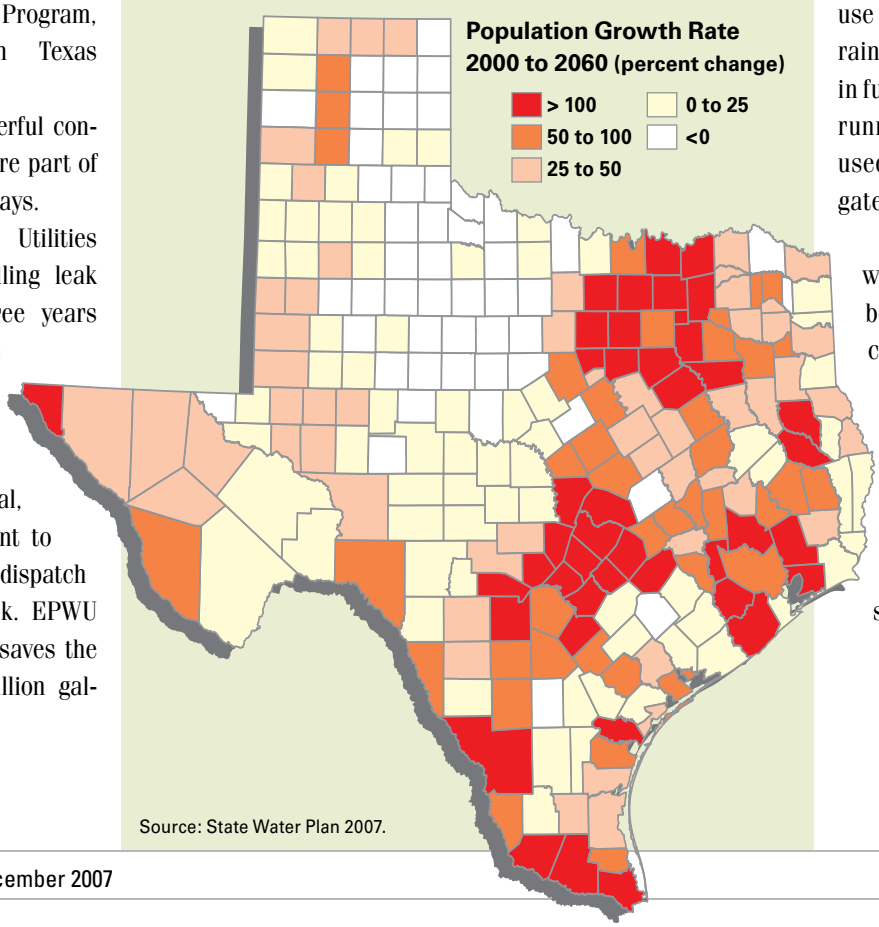
In the North Plains region, where the Ogallala Aquifer is being depleted faster than it can recharge, it will become more expensive to pump the deeper water out, Johnson says.

"At some point it doesn't pay to pump the water on the crop," he says. FN

Getting Bigger All the Time

The TWDB estimates that the populations of 43 counties and 297 cities will have very large gains by 2060, giving the state more than 45 million people, compared with 23.5 million in 2006.

For instance, Collin County in North Texas had 491,774 residents in 2000. By 2060, the county could have more than 2 million residents. In contrast, Duval County in South Texas is expected to hold steady at around 13,000 people.



Source: State Water Plan 2007.

by Clint Shields

The Revised Franchise Tax

Changes mean more businesses will be affected

The Texas franchise tax has been revised by changing the tax base and rate and by extending coverage to most legal entities. These changes apply to Texas Tax Code, Chapter 171.

"Many Texas businesses not previously taxed under the franchise tax, such as partnerships and trusts, will become subject to the revised franchise tax," says William Hamner, director of the Comptroller's Tax Administration Division. "In addition, all taxpayers, new and old, will be required to learn a new tax calculation because the new law changes the tax base."

Generally, Texas' revised franchise tax will take effect for reports originally due on or after Jan. 1, 2008. This is a privilege tax imposed on each taxable entity chartered or organized in Texas or that is doing business in Texas. Revisions are the result of House Bill (HB) 3 from the 79th Texas Legislature, as well as some changes and clarification from HB 3928 from the 80th Legislature.

Tax Talk

Most legal entities in Texas are subject to the revised franchise tax, including partnerships (general, limited and limited liability), corporations, limited liability companies, business trusts, professional associations, business associations, joint ventures and some other legal entities.

There are, however, some exceptions, including:

- sole proprietorships
- general partnerships — except for limited liability partnerships — directly owned entirely by people and not by another entity
- certain grantor trusts, estates of people and escrows
- real estate mortgage investment conduits and real estate investment trusts

How margin is apportioned, meanwhile, does not change with the revised tax. How an entity's margin is calculated is detailed online at www.window.state.tx.us/taxinfo/franchise/margin.html#margin.

Taxable entities with total revenue of $10 million or less may elect to pay the franchise tax using an E-Z computation method. To do this, an entity multiplies its total revenue times its apportionment factor times 0.575 percent.

More information on the franchise tax, including a list of exceptions, entities exempt from the tax and computation methods, is available on the Comptroller's Web site at www.window.state.tx.us/taxinfo/franchise/index.html, by e-mail at tax.help@cpa.state.tx.us or by calling (800) 252-1381 or 463-4600 in Austin.

HB 3928 clarified requirements for partnerships dissolving in 2007. The Tax Policy Division addresses a number of frequently asked questions regarding those partnerships and the transition to the franchise tax online at www.window.state.tx.us/taxinfo/franchise/tranfaq.html.

New Base and Rate

Taxable entities with revenues of $10 million or less may elect to pay the franchise tax using an E-Z computation method. For all other taxable entities, franchise taxes will be due on a percentage of that entity's taxable margin.

Taxable margin is defined as the smallest of three calculated values: 70 percent of total revenue; total revenue less the cost of goods sold; and total revenue less compensation.

The tax rate applied to an entity's taxable margin will be 1 percent for a business not primarily engaged in wholesale or retail trade. For a qualifying business primarily engaged in wholesale or retail trade, the tax rate will be 0.5 percent.

The previous franchise tax rates were 0.25 percent for taxable capital and 4.5 percent for earned surplus. FN

Click on the News

The Comptroller's office keeps you abreast of tax changes and updates with Tax Policy News. This monthly newsletter covers a range of Texas tax topics, including:

- Franchise Tax
- Sales Tax
- Severance Tax
- Hotel Occupancy Tax
- Tobacco Tax and many others

Tax Policy News — including archived issues — is available on the Comptroller's Web site at www.window.state.tx.us/taxinfo/taxpnw/taxpnw.html. You can also be notified when a new issue is released by sending an e-mail to tax.help@cpa.state.tx.us with "Tax Policy News" in the subject line.

Lineup Changes

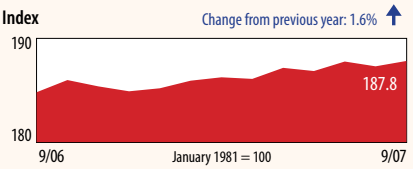
Several business entities that previously had no responsibility for filing a tax must now pay the revised franchise tax, including:

- partnerships
- business trusts
- professional associations
- business associations
- joint ventures
- holding companies
- other legal entities

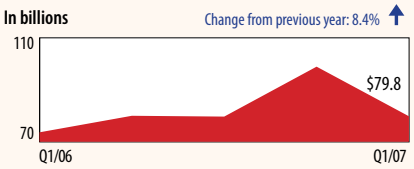
Key Economic Indicators

The Texas economy, although adding jobs at twice the national rate, is expected to see a gradual slowdown over the next two years. Weakness in the nation's housing sector is expected to continue in 2008, and several years of consumer spending that exceeded personal income will put pressure on retail sales. Help wanted advertising and housing construction have cooled over the past year. However, Texas exports, boosted by a weaker dollar, are expected to increase at double-digit annual rates.

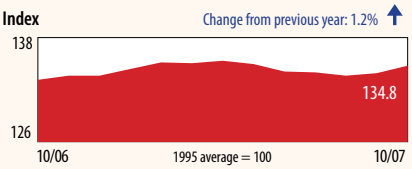
Leading Indicators



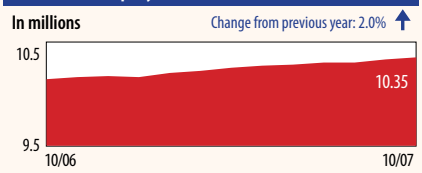
Retail Sales



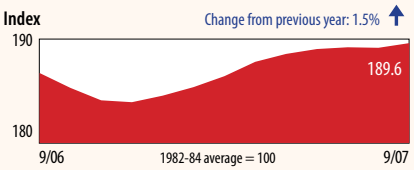
Industrial Production



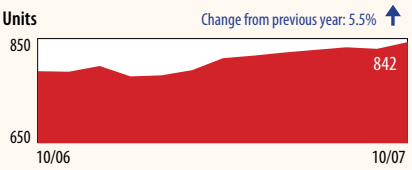
Non-farm Employment



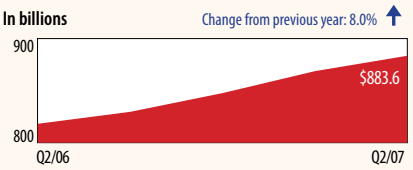
Consumer Price Index



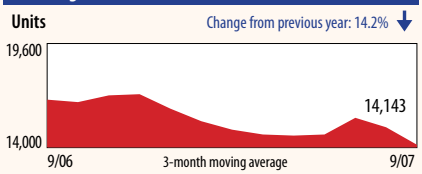
Oil and Gas Rigs



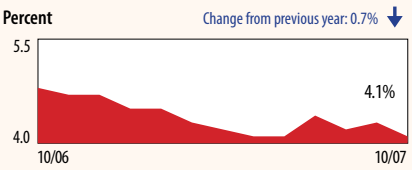
Personal Income



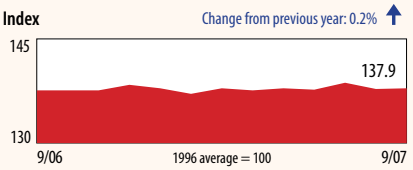
Housing Permits



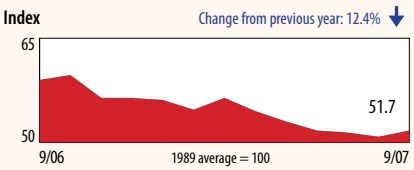
Unemployment Rate



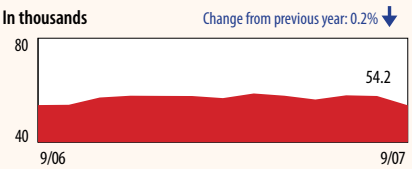
U.S. Leading Indicators



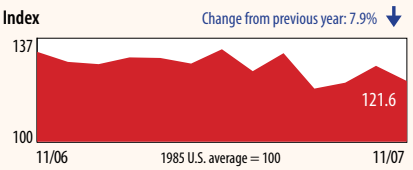
Help Wanted



Unemployment Initial Claims



Consumer Confidence (Tx, La, Ok, Ar)



Texas Production and Consumption Indicators

(Amounts in millions)

	Crude Oil		Natural Gas		Motor Fuel (in gallons)		Cement	Auto Sales	Cigarettes
Date	Barrels	Value	Thousands of Cubic Ft.	Value	Gasoline	Diesel	Tons	Net Value (Estimated)	Pkgs. Taxed
2002	350.4	$8,535.9	3,132.5	$8,689.5	11,280.2	3,043.6	13.6	$41,585.8	1,270.3
2003	339.8	9,974.9	3,004.8	13,589.1	11,134.5	3,069.9	14.9	39,296.2	1,234.3
2004	328.0	12,772.2	2,910.5	14,757.5	11,326.8	3,305.8	15.1	39,174.6	1,228.9
2005	325.3	17,148.0	3,019.8	20,359.2	11,287.2	3,463.3	16.6	41,955.3	1,239.0
2006	319.5	19,653.0	3,468.1	20,150.7	11,372.8	3,731.6	17.0	45,756.2	1,280.2
	9/06-9/07		8/06-8/07		10/06-10/07		9/06-9/07		9/06-9/07
Last	26.1	$1,569.9	300.7	$1,843.0	959.8	313.4	1.4	$4,118.4	107.6
13	27.1	1,489.9	293.1	1,611.3	969.3	326.5	1.4	3,989.7	124.6
months	26.4	1,432.7	303.5	1,252.2	942.2	299.9	1.4	3,436.7	117.3
	26.9	1,524.8	302.4	1,798.0	963.1	300.9	1.2	3,336.3	75.0
	26.3	1,323.0	322.8	1,971.8	923.2	299.5	1.2	3,669.5	68.5
	24.4	1,350.3	313.0	1,621.9	880.2	304.8	1.3	3,717.8	96.9
	27.0	1,541.3	295.7	1,779.3	968.2	369.2	1.5	4,128.7	109.7
	26.1	1,561.2	344.1	2,106.2	983.1	248.5	1.5	4,233.3	92.3
	26.5	1,556.7	332.8	2,047.4	1,002.3	326.8	1.5	4,227.3	89.5
	25.0	1,553.0	358.2	2,352.8	978.2	326.3	1.4	4,159.0	96.2
	25.1	1,763.7	356.8	2,368.5	974.3	320.5	1.3	4,368.3	151.3
	26.1	1,799.2	374.3	2,251.7	1,021.1	360.6	1.7	4,383.8	29.3
	23.2	1,757.4	340.9	1,855.8	939.6	315.9	1.5	4,294.2	96.1

Notes: Crude oil and natural gas show taxable production and net taxable value for the production month. Oil and gas data are revised monthly from taxpayer records. Gasoline gallons include gasohol. Auto sales estimates are calculated from motor vehicle taxes that include taxable transactions in addition to the sale of new and used motor vehicles. Previous year totals may not match totals shown online due to updates. Figures are totaled on a calendar year.

Sources for Data

Retail Sales, Leading Indicators Index, Help-Wanted Index, Industrial Production Index:
Texas Comptroller of Public Accounts

Non-farm Employment, Unemployment Initial Claims:
Texas Workforce Commission

Texas Consumer Price Index:
Texas Comptroller of Public Accounts and U.S. Bureau of Labor Statistics

Unemployment Rate:
U.S. Bureau of Labor Statistics

Oil/Gas Rig Count:
Baker-Hughes Inc.

Consumer Confidence Index:
The Conference Board

U.S. Leading Indicators Index, Personal Income:
U.S. Bureau of Economic Analysis

Texas Housing Permits:
U.S. Bureau of the Census

Notes: All figures are seasonally adjusted, except for the rig count, retail sales and consumer confidence. All figures are monthly except for retail sales and personal income, which are quarterly.

Figures are based on most recent available data.

October Cash Condition[1]

(Amounts in millions)	General Revenue	Other Funds	Total Cash
Beginning Balance October 1, 2007	$12,975.1	$9,088.0	$22,063.1
Revenue/Expenditures			
Revenue	5,664.4	1,484.7	7,149.1
Expenditures	7,820.8	1,891.2	9,712.0
Net Income (outgo)	-2,156.4	-406.5	-2,562.9
Net Interfund Transfers and			
Investment Transactions	-294.2	1,816.9	1,522.7
Total Transactions	-2,450.6	1,410.4	-1,040.2
End Cash Balance October 31, 2007[2]	**$10,524.5**	**$10,498.4**	**$21,022.9**

[1] Cash stated is from the Comptroller's Uniform Statewide Accounting System (USAS) and will vary from the amounts reflected in the cash accounts of the Treasury Operations Division of the Comptroller's office due to timing differences. Net amounts shown (less refunds) exclude funds that are authorized to be held outside the State Treasury and are not processed through USAS. Suspense and Trust Funds are included, as are unemployment compensation trust funds collected by the state but held in the Federal Treasury. Totals may not add due to rounding.

[2] The ending General Revenue Fund Balance includes $4.9 billion derived from the sale of cash management notes.

State Revenue/All Funds[1]

(Amounts in millions)	Monthly Revenue Oct. 2007	Fiscal Year-to-Date Sept. 2007-Oct. 2007 Revenue	% Change YTD/YTD
Tax Collections by Major Tax			
Sales Tax	$1,660.9	$3,288.6	5.0%
Oil Production Tax	89.6	167.3	11.2
Natural Gas Production Tax	161.1	342.1	8.6
Motor Fuels Taxes (Gasoline, Diesel, LPG)	251.2	527.6	3.2
Motor Vehicle Sales/Rental and			
Manufactured Housing Taxes	311.9	595.0	5.7
Franchise Tax	25.2	53.2	-14.3
Cigarette and Tobacco Taxes	141.5	187.1	91.3
Alcoholic Beverages Taxes	61.2	123.6	6.1
Insurance Taxes	13.0	28.3	0.1
Utility Taxes[2]	128.6	129.0	-2.4
Inheritance Tax	2.2	2.2	128.1
Hotel and Motel Tax	31.3	60.8	10.9
Other Taxes[3]	132.4	139.1	-19.5
Total Tax Collections	**$3,010.1**	**$5,643.7**	**5.7%**
Revenue by Receipt Type			
Tax Collections (see above)	$3,010.1	$5,643.7	5.7%
Federal Income	2,128.6	3,901.9	5.2
Interest and Investment Income	267.6	566.9	28.5
Licenses, Fees, Permits, Fines and Penalties	499.4	1,024.6	8.4
Employee Benefit Contributions	323.0	498.6	2.2
Sales of Goods and Services	27.2	73.6	9.4
Land Income	84.6	174.3	23.4
Net Lottery Proceeds[4]	167.8	297.1	35.2
Other Revenue Sources	640.9	1,019.5	1.3
Total Net Revenue	**$7,149.1**	**$13,200.2**	**6.8%**

[1] Excludes revenues for funds that are authorized to be held outside the State Treasury and are not processed through USAS. Totals may not add due to rounding.

[2] Includes the utility, gas utility administration and public utility gross receipts taxes.

[3] Includes the cement and sulphur taxes and other occupation and gross receipt taxes not separately identified.

[4] Gross sales less retailer commissions and the smaller prizes paid by retailers.

State Expenditures/All Funds[1]

(Amounts in millions)	Monthly Expenditures Oct. 2007	Fiscal Year-to-Date Sept. 2007-Oct. 2007 Expenditures	% Change YTD/YTD
By Object			
Salaries and Wages	$887.1	$1,606.6	3.9%
Employee Benefits/			
Teacher Retirement Contribution	773.9	1,390.5	13.4
Supplies and Materials	76.8	159.3	22.9
Other Expenditures	252.7	485.2	12.9
Public Assistance Payments	2,641.7	5,107.6	10.7
Intergovernmental Payments:			
Foundation School Program Grants	3,403.5	9,081.3	41.9
Other Public Education Grants	3,824.5	683.0	0.2
Grants to Higher Education	128.9	262.0	14.7
Other Grants	215.9	391.9	6.3
Travel	13.1	23.7	7.2
Professional Services and Fees	165.7	386.8	14.7
Payment of Interest/Debt Service	12.7	184.5	59.3
Highway Construction and Maintenance	471.3	1,016.5	-12.9
Capital Outlay	39.8	88.8	66.1
Repairs and Maintenance	61.2	129.5	12.4
Communications and Utilities	44.5	78.4	-23.9
Rentals and Leases	20.3	49.6	5.1
Claims and Judgments	8.7	34.4	168.3
Cost of Goods Sold	69.2	145.0	12.4
Printing and Reproduction	3.9	7.4	-14.6
Total Net Expenditures	**$9,712.0**	**$21,312.0**	**20.2%**
By Function			
General Government			
Executive	$508.7	$946.5	10.6%
Legislative	10.8	22.5	8.8
Judicial	21.9	44.1	2.3
Subtotal	541.4	1,013.0	10.2
Health and Human Services	2,526.2	4,922.1	10.1
Public Safety and Corrections	321.4	740.0	6.4
Transportation	694.4	1,461.5	-4.8
Natural Resources/Recreational Services	178.2	324.5	2.6
Education	4,692.9	11,269.1	33.7
Regulatory Agencies	36.5	61.2	42.7
Employee Benefits	657.3	1,205.2	12.0
Debt Service—Interest	12.7	184.5	59.3
Capital Outlay	39.8	88.8	66.1
Lottery Winnings Paid[2]	11.2	42.2	-44.3
Total Net Expenditures	**$9,712.0**	**$21,312.0**	**20.2%**

[1] Excludes expenditures for funds that are authorized to be held outside the State Treasury and are not processed through USAS. Totals may not add due to rounding.

[2] Does not include payments made by retailers. Previously shown as "Other expenditures."

Some revenue and expenditure items have been reclassified, changing year-to-date totals. The ending cash balance is not affected because changes reflected in "total net revenues" and "total net expenditures" offset changes in "net interfund transfers and investments transactions" in the cash condition table.

Revenues and expenditures are reported for the most recent month available and as a running total for the current fiscal year-to-date. In addition, year-to-date figures are compared with the same period in the last fiscal year. These comparisons are reported as percentage changes, which may be positive or negative (shown by a minus sign).

Trust fund transactions are included within revenues and expenditures in the "all funds" presentations. Trust funds are not available to the state for general spending.

Texas Stats Production: Tyra Peterson, Public Outreach and Strategies Division.
Economic Data: Winfred Kang and Gary Preuss, Revenue Estimating Division.
State Financial Tables: Ann Zigmond, Fund Accounting Division.

SUSAN COMBS
Texas Comptroller of Public Accounts

FISCAL NOTES is one of the ways the Comptroller's office strives to assist taxpayers and the people of Texas. The newsletter is a by-product of the Comptroller's constitutional responsibilities to monitor the state's economy and to estimate state government revenues.

FISCAL NOTES also provides a monthly summary of the financial statements for the State of Texas.

Articles and analysis appearing in *FISCAL NOTES* do not necessarily represent the policy or endorsement of the Texas Comptroller of Public Accounts. Space is devoted to a wide variety of topics of Texas interest and general government concern.

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DELANE CAESAR
Director of Public Outreach and Strategies

Creative Directors
Beth Hallmark and Dan Lynch

Editorial Team Leader
Karl Wolfshohl

Staff Writers
Karen Hudgins, Tracey Lamphere, David Rivers, Clint Shields and Bruce Wright

Graphics Director
Dwain Osborne

Graphics, Layout and Photography
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Publication #96-369,
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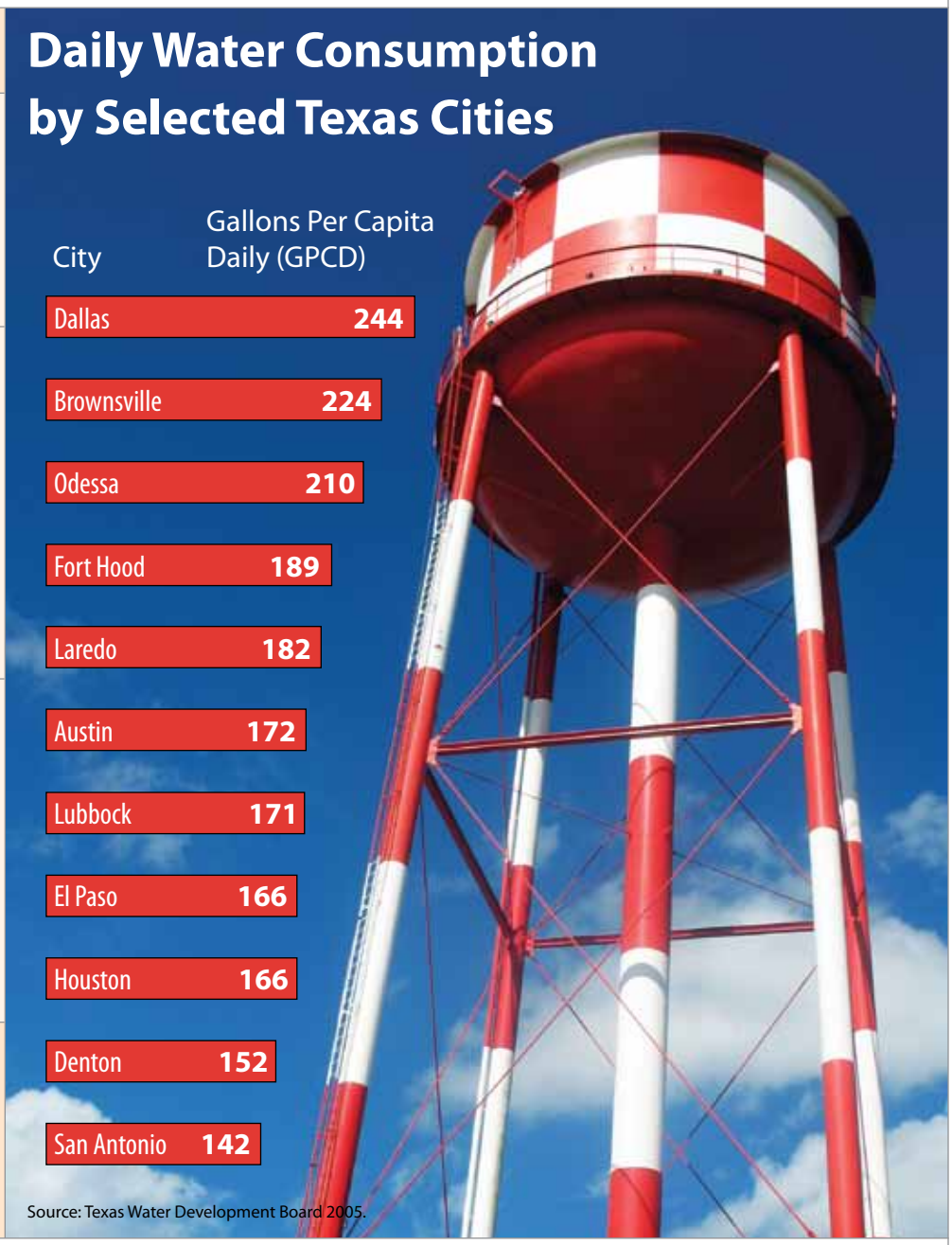
Daily Water Consumption by Selected Texas Cities



City	Gallons Per Capita Daily (GPCD)
Dallas	244
Brownsville	224
Odessa	210
Fort Hood	189
Laredo	182
Austin	172
Lubbock	171
El Paso	166
Houston	166
Denton	152
San Antonio	142

Source: Texas Water Development Board 2005.

FISCAL NOTES
A Monthly Review of the Texas Economy from the Office of Susan Combs, Texas Comptroller of Public Accounts

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